

APPLICANT(S): EDLIS, Ophir  
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20. The apparatus of claim 19, wherein the first processing unit is able to perform a backward iterative calculation on at least a portion of the first sub-block based on results of a backward iterative calculation performed by the second processing unit on at least a portion of the second sub-block.
21. The apparatus of claim 20, wherein the first processing unit is able to perform forward iterative calculations on at least a portion of the first sub-block.
22. The apparatus of claim 21, wherein the first processing unit is able to decode the first sub-block and to provide an output based on the forward and backward iterative calculations performed on the first sub-block.
23. The apparatus of claim 20, wherein the second processing unit is able to perform backward and forward iterative calculations of the second sub-block and to provide an output based on results from the forward and backward calculations performed on the second sub-block.
24. The apparatus of claim 19, wherein the memory is able to store the results of the iterative calculations performed on the first sub-block and the results of the iterative calculations performed on the second sub-block.
25. The apparatus of claim 24, wherein portions of the memory are freed up as an output of the first sub-block is calculated.
26. The apparatus of claim 25, wherein results output from iterative calculations on the second sub-block are stored in the freed up portions of the memory.

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27. The apparatus of claim 19, wherein the first and second sub-blocks may be partitioned into two or more sub-block segments.
28. The apparatus of claim 27, wherein at least some of the sub-block segments are decoded by a separate thread and/or separate process running on one of the processing unit.
29. The apparatus of claim 27, wherein at least some of the sub-block segments are decoded by a separate thread and/or separate process running on a digital signal processor.
30. A method comprising:  
parsing an encoded data block into first and second sub-blocks; and  
performing a forward and backward decoding on the first and second sub-blocks by decoders of first and second processing units.
31. The method of claim 30, further comprising:  
performing a backward iterative calculation on the first sub-block based on results of a backward iterative calculation performed on at least a portion of the second sub-block.
32. The method of claim 30, wherein performing a forward and backward decoding on the first and second sub-blocks comprises decoding sub-block segments by a separate thread and/or separate process.
33. The method of claim 30, further comprising:  
storing the results output from iterative calculations on a first sub-block and the results output from iterative calculations on a second block.

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34. The method of claim 33, wherein storing comprises:

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freeing up portions of a memory as an output of the first sub-block is calculated; and  
storing results output from iterative calculations on the second sub-block in the freed  
up portion of the memory.

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